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**(54) METHOD FOR JUDGING STABILITY OF
WELDING AT STATIONAL PART OF ARC
WELDING AND DEVICE FOR JUDGING
STABILITY**

(57) Abstract

PROBLEM TO BE SOLVED: To prevent the flowing of welded defective developed caused by the instability of arc discharging state, in the state welding part of a consumable electrode type gas shielded arc welding.

SOLUTION: This device transmits analog signals by detecting the welding current and the welding voltage with detecting means 7, 8. Even analog signal is made to a digital signal by sampling with an A/D converter 9. Based on these digital signals, one or more items among four items of welding current integral value standard deviation during arc in each one period, welding current integral value standard deviation during short circuit in one period, arc/short circuit time ratio standard deviation in each one period and short circuit frequency with a CPU 10 are calculated. When the difference between the calculated value of any item and the corresponding reference value exceeds the permissible range, it is judged that the welding is unstable or defective and the result is displayed.

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